

## AWARDS AND RECOGNITIONS

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- Business Council of Alabama and Alabama Technology Network's Manufacturer of the Year (Medium Category), 2007
- Project on Global Working Families study by Harvard University, one of four U.S. companies selected out of 11 worldwide
- EPA Landfill Methane Outreach Program Project of the Year, 2006
- Alabama Associated General Contractors Build Alabama Award, 2006
- Governor's Conservation Achievement Award for Air Conservationist of the Year, 1999 and 2007

## LOCATIONS

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Albany, GA	Dalton, GA	Pelham, AL
Albertville, AL	Dothan, AL	Pensacola, FL
Attalla, AL	Florence, AL	Savannah, GA
Bluffton, SC	Huntsville, AL	St. Clair County, AL
Chattanooga, TN	Jacksonville, FL	Tallahassee, FL
Cleveland, TN	Mobile, AL	Tuscaloosa, AL
Columbus, GA	Montgomery, AL	
Coosada, AL	Panama City, FL	



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# Brick:

## The Environmentally Friendly Choice for America's Homes



Jenkins Brick Company

# THE NATURAL CHOICE FOR SUSTAINABLE DESIGN

Jenkins Brick Company's use of landfill gas at its Montgomery and Jordan plants produces a total annual greenhouse gas reduction equivalent to planting 45,600 acres of forests, removing the emissions of 31,900 vehicles or preventing the consumption of 387,450 barrels of oil.

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The concept of sustainability and "green" building practices has caused significant changes within the commercial and residential construction industry over the past decade.

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**S**ustainability, in essence, is the practice of planning the built environment in a manner that minimizes disruption to the natural environment, and promotes the health of the natural environment and the built environment.

**Building green is more than just an environmental buzzword, though. In the end, the consumer also benefits from sustainability through less-frequent maintenance needs and greater energy efficiency, resulting in lower costs over the life of a building, as well as a healthier indoor environment.**

**When it comes to energy efficiency, durability, and other green qualities, brick is unrivaled as an environmentally-friendly building material.**

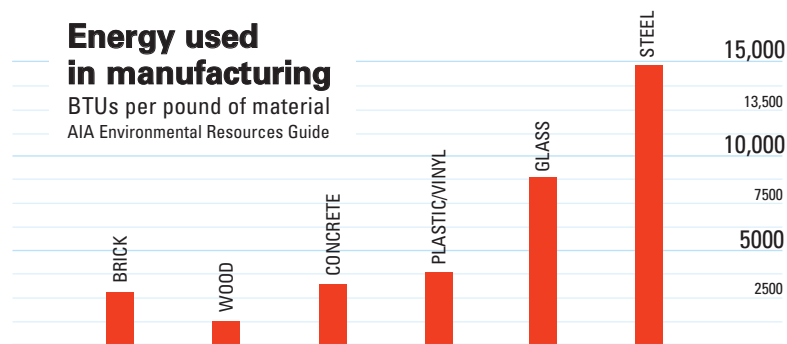
## **ENVIRONMENTAL BENEFITS OF USING BRICK**

**1) Durability:** Think of the oldest and most impressive manmade structures on Earth: The Great Wall of China, Independence Hall in Philadelphia, The Palace of Westminster in London, The Empire State Building in New York. Brick holds them together. Brick has existed as a building product for thou-

sands of years, and it has a track record of safety and durability – hallmarks of sustainable building.

For the consumer, brick's durability also means minimal upkeep. When compared to other building materials, brick has an unsurpassed life cycle. It will last for at least 100 years with little maintenance or repair. Because of its durability, a brick home typically has a higher appraisal and resale value and can result in lower insurance costs. Brick will outlast your mortgage too.

**2) Emissions:** Brick enhances the indoor environment as well as the out of doors. Brick is an inert natural product and contains no hazardous chemicals or volatile organic compounds. Unlike vinyl, wood, or EIFS, brick emits no toxic fumes or smoke when heated to high temperatures and of course will not burn. And unlike vinyl, wood, EIFS, or cementitious fiber board, it does not require painting, further eliminating emission of chemicals and odors into the environment. By eliminating the need for paint and minimizing maintenance needs, brick promotes a healthy environment.



**3) Energy Efficiency:** According to the U.S. Department of Energy, commercial and residential building operations account for 39 percent of energy consumption in the United States. The process of making brick, however, is energy-efficient. In fact, the amount of energy required in the entire brick-making process from mining to manufacturing to distribution, is approximately 4,000 BTUs per pound — less than concrete, glass, steel, and aluminum. Hollow brick requires even less energy to produce.

Brick's energy efficiency extends to the home as well. Brick is a natural insulator — it has the ability to absorb and release heat over an extended period of time, which helps reduce energy consumption. For instance, the heat absorbed by brick during the day can help warm the home at night.

Because of its thickness, brick also requires less insulation than most other materials for the same energy performance. This all adds up to a lower heating and cooling bill!

**4) Mold:** Brick is not food for mold.

**5) Recycling and Reuse:** Because of brick's durability, it is often reused for new construction. There are countless reuse options for salvaged brick, such as barbecue grills, sidewalks, pavers, or for landscaping and gardens, as well as other new structures. Sand-set pavers are especially suited for reuse in new pavements and other projects. Brick can also be recycled, resulting in less waste going to landfills. In addition, Jenkins Brick uses landfill gas to fire three of its five brick kilns. Not only does this practice put to use a recycled waste energy source, but it also reduces emission of methane, a potent greenhouse gas.

**6) Conservation:** Brick is a natural product made of the most abundant materials on the planet — clay and shale. Throughout the brick manufacturing process there is practically no waste — virtually all of the mined material is used. Damaged or rejected bricks are simply reused as raw material. No chemicals are needed or used in brick production. Home owners also have the option of using hollow brick, which consumes even fewer raw materials. Hollow brick is lighter than standard brick.

**7) Safety:** Have you ever seen an old home that has been destroyed by fire? If it had a brick chimney, you probably noticed that was the only part that remained intact. Because brick is fireproof and doesn't release toxic fumes in a fire, it makes for a safer home as well as the possibility of lower fire insurance premiums. And its strength resists impact, such as projectile debris flung at it from a tornado or hurricane.

**8) Comfort:** Because brick does not need to be painted and resists mold and insects, no chemical treatments are necessary, in turn promoting better indoor air quality and a healthier family environment. Brick's acoustic properties help control noise, leading to a quieter home.



**Overall, Jenkins' bricks are durable, natural products that contribute to a comfortable, energy-efficient home and are made in an environmentally-friendly way.**

**USING LANDFILL GAS AS A SUBSTITUTE FOR NATURAL GAS PROVIDES JENKINS BRICK COMPANY WITH THE OPPORTUNITY TO CONTRIBUTE POSITIVELY TO THE ENVIRONMENT IN WHICH WE ALL LIVE WHILE OFFERING ECONOMIC BENEFITS TO THE PRODUCTION OF OUR PRODUCTS.**



**M**ethane is one of the most harmful of all greenhouse gases, with 23 times the heat storage capacity of carbon dioxide. Methane is reduced to carbon dioxide and water when it is burned and thereby its' greenhouse gas effect is greatly reduced from that of its raw form as produced in landfills. According to the United States Environmental Protection Agency, municipal solid waste landfills account for 34 percent of methane emissions in America. Because 50 percent of its volume is methane, landfill gas is the largest man-made source of greenhouse gas emissions. Build-up of methane in landfills and coal mines can be very dangerous.

In 1999, Jenkins Brick Company converted its Montgomery Plant from full reliance on natural gas to obtaining a majority of its kiln energy from landfill gas. Jenkins Brick is one of only three brick manufacturers currently using this technology in the United States. With the Montgomery Plant conversion, the company was able to help the City of Montgomery comply with the New Source Performance Standards of the Clean Air Act for landfill gas emissions. For its efforts, in 1999 and again in 2007 Jenkins Brick Company was awarded the Governor's Conservation Achievement Award for Air Conservationist of the Year.

The Jenkins Brick's Company's newest plant, the William M. Jordan, Jr. Plant in St. Clair County, Alabama, also employs landfill gas, obtained through its 6.5-mile-long pipeline from the Veolia Environmental Services Star Ridge Landfill. One of the largest plants of its kind in the United States, the Jordan Plant is the first major manufacturing operation in the nation built near a landfill for the purposes of using landfill gas as fuel. Landfill gas will account for 40 percent of the plant kiln's energy needs at first, and is projected to be its sole source in future years as the landfill grows.

By firing its kilns with landfill gas, the company substantially downgrades the impact of landfill gas on global warming, reduces America's demand for fossil fuels, and recycles energy. This avoids sending combustion products of alternative fossil fuel hydrocarbons to the atmosphere. According to the EPA, the use of landfill gas at the

**One of the largest plants of its kind in the United States, the Jordan Plant is the first major manufacturing operation in the nation built near a landfill for the purposes of using landfill gas as fuel.**

Jordan Plant alone will have estimated annual emissions reductions of 19,000 metric tons of carbon equivalents with annual greenhouse gas reductions equivalent to planting 19,600 acres of forest, removing the emissions of 13,700 vehicles, or preventing the use of 166,600 barrels of oil, and annual energy savings equivalent to heating 4,500 homes.

A proportional application of the EPA's Jordan Plant greenhouse gas reduction effect for our work with landfill gas at our Montgomery Plant results in annual greenhouse gas reductions equivalent to planting 26,000 acres of forest, removing the emission of 18,200 vehicles, or preventing the use of 220,850 barrels of oil.

**Using landfill gas at the Jordan and Montgomery plants results in a total annual greenhouse gas reduction equivalent to planting 45,600 acres of forest, removing the emission of 31,900 vehicles, or preventing the use of 387,450 barrels of oil.**





*At its Montgomery and Jordan Plants, Jenkins Brick uses a Dry Injection Fabric Filter (DIFF) scrubber to remove chemical compounds harmful to the environment as well as particulates from the air.*

The EPA has been supportive of Jenkins Brick's application of landfill gas through the agency's Landfill Methane Outreach Program (LMOP), which has provided the company with valuable technical expertise. The government characterizes the Jordan Plant as a "green" project and bestowed Jenkins Brick with the EPA's LMOP Project of the Year Award for 2006. Also, the complexity of the plant's construction earned the project two Build Alabama Awards from the Alabama Associated General Contractors.

"For centuries, bricks have been the building blocks of society, and now, by turning landfill waste into wealth, Jenkins Brick is also helping build a clean and plentiful energy supply for America," said EPA's top executive, Administrator Stephen L. Johnson, at the Jordan Plant opening.

Jenkins Brick is committed to helping protect the environment. The landfill gas capability has itself added \$4 million to the capital cost of the Jordan Plant. The company is proud to use this economical alternative energy source as a way to help improve the quality of our environment in Alabama.

### **EMISSION CONTROL**

The EPA requires Jenkins Brick, as well as other brick manufacturers, to install Dry Lime Absorber (DLA) scrubbers on its plant stacks. These devices would have cost Jenkins Brick approximately \$800,000 each. Contrary to the practices of some other U.S. brick manufacturers, Jenkins Brick chose instead to purchase at approximately \$2.2 million each Dry Injection Fabric Filter (DIFF) scrubbers. DIFFs are substantially more effective at removing chemical compounds harmful to the environment as well as particulate matter than are the DLAs required by the EPA. The operating cost of DIFFs is measurably higher than DLAs as well. By taking this course of action Jenkins Brick has confidence that it is undertaking the most effective action available to protect the environment in which we all live.



### **RECLAMATION EFFORTS**

For brick production, companies "mine" clay, and shale and one excavation site may provide raw materials for decades. After mining of an excavation pit is complete sites are typically restored to a productive natural condition. Jenkins Brick has been mining raw materials for over 100 years and has a proven history of turning reclaimed sites into resources that are useful and can be enjoyed by property owners. For example the former Saco Pit in northern Montgomery County, Ala. since been converted to a fish and recreation pond.



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## HOW USING BRICK CAN HELP

# protect the environment

### USING BRICK IN NAHB MODEL GREEN HOME BUILDING GUIDELINES

The National Association of Home Builders developed the “Model GREEN Home Building Guidelines” to demonstrate methods that the modern home builder could incorporate green building practices. Brick’s environmentally-friendly qualities fit into many of these guidelines.



## NAHB GREEN HOME BUILDING GUIDELINES

### **SECTION 1: LOT DESIGN, PREPARATION AND DEVELOPMENT**

**1.3 Design the Site:** “Manage storm water using low-impact development when possible” Using brick pavers in a permeable pavement system improves stormwater management by improving ground infiltration and reducing the amount of stormwater run-off.

### **SECTION 2: RESOURCE EFFICIENCY**

**2.1 Reduce Quantity of Materials and Waste:** “Use building materials that require no additional finish resources to complete application on-site.” Brick does not require painting or staining.

**2.2 Enhance Durability and Reduce Maintenance:** “Use termite-resistant materials...” Because it contains no organic material, brick resists both mold and insects, and no chemical treatments are necessary.

**2.3 Reuse Materials:** “Reuse salvaged materials where possible.” There are countless reuse options for salvaged brick — barbecue grills, sidewalks, roads, or for landscaping and gardens. Sand-set pavers are especially suited for reuse in new pavements and other applications.

#### **2.4 Use of Recycled Materials:**

Bricks from a project site can also be used as raw material for new bricks. Other industrial materials such as fly ash or slag and even sawdust can be incorporated into brick.

**2.5 Recycle Waste Materials During Construction:** “Conduct on-site recycling efforts...recycle construction waste off-site.”

Brick scraps from a project site can be used as raw material for new bricks. Brick can also be crushed and recycled for use as roadway sub-base material or as brick chips for landscaping.

**2.6 Use Renewable Materials:** “Use materials manufactured from renewable resources...” Brick is made from natural, abundant materials, shale and clay.

**2.7 Use Resource-Efficient Materials:** *“Use products that contain fewer resources than traditional products.”* Hollow brick uses fewer raw materials than solid brick. Hollow brick also requires less energy to produce and is lighter than standard brick, meaning that it requires less energy and has fewer emissions associated with transport.

**2.8 Innovative Options:** *“Use locally available, indigenous materials”* Clay and shale is always extracted from areas near Jenkins Brick plants, so there is no need to import raw materials. Also, Jenkins Brick manufacturing facilities are within 300 miles of most projects in the Southeast United States.

**2.8 Innovative Options:** *“Use a life-cycle assessment tool to compare environmental burden of building materials...use the most environmentally-preferable product for that building component.”* Because Jenkins Brick uses landfill methane gas, a waste energy source, to fire its brick kiln, its products have a lower environmental impact associated with material production.

**SECTION 3: ENERGY EFFICIENCY**

**3.3 Prescriptive Path:** *“Renewable energy/solar heating and cooling”* Brick has a high thermal mass, which gives it the ability to absorb and release thermal energy over an extended period, making it ideal for use in passive solar designs. Exploiting brick’s thermal properties can help to control energy needed for climate control by reducing peak energy loads, which can also allow for a smaller HVAC system. For instance, the heat absorbed by brick during the day can help warm the building’s climate at night. Because of its thickness, brick requires less insulation than most other materials to achieve the same energy performance. By contributing to an energy-efficient strategy, brick can help optimize the energy performance of any project.

**SECTION 5: INDOOR ENVIRONMENTAL AIR QUALITY**

**5.4 Innovative Options.** Brick is a natural product and contains no hazardous chemicals or volatile organic compounds. Brick emits no toxic fumes or smoke, even when heated to high temperatures. In addition, it does not require painting, further eliminating emission of chemicals and odors into the indoor environment.







## **ABOUT JENKINS BRICK**

In the late 1800s, Mike Jenkins, Sr., a railroad worker, suffered an injury that resulted in the loss of one of his legs. While recuperating, Jenkins designed a beehive, which he subsequently began to manufacture and sell throughout the South. As demand for his beehive grew, the need for a new factory arose. Unable to obtain the brick necessary to build the factory, the inventive Jenkins began to produce his own brick. The quality of his newest product stimulated market demand and prompted him to begin manufacturing brick as a business in addition to the beehives. In 1903, Jenkins built a second brick plant in Montgomery, Ala.

Five generations later, Jenkins Brick Company has grown to include distribution yards and retail showrooms in Alabama, Georgia, Florida, South Carolina, and Tennessee with production facilities in the Birmingham area, Montgomery and Coosada, Ala.

The company's newest production facility is the \$56-million William M. Jordan Jr. Plant, named in honor of the company's long-time Chairman of the Board. Located on a 160-acre site in St. Clair County near the city of Birmingham, the Jordan Plant is one of the most technologically advanced brick manufacturing plants in the world. The main production building covers 210,000 square feet, and the grinding building covers 37,000 square feet.

"Alabama is experiencing unprecedented economic growth and new jobs are being created all across the state. I'm proud that an existing Alabama industry, Jenkins Brick, is also growing and creating new jobs and a better quality of life for our citizens," said Alabama Governor Bob Riley at the opening of the Jordan Plant.

J E N K I N S   B R I C K   C O M P A N Y

## **MISSION STATEMENT**

The purpose of our company is to provide our customers with quality products and services at competitive prices, and delivered at a level of profitability that allows for a vigorous and healthy development of our organization and of our associates' careers.